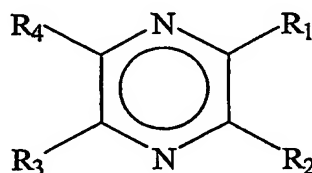


Claims

1. A composition comprising caramelised carbohydrate, which composition, when dissolved in water at a dry solids content of 0.1 wt.%, exhibits:
- 5 i. an absorption at 280 nm (A_{280}) that exceeds 0.01, preferably exceeds 0.05; and
- ii. an absorption ratio $A_{280/560}$ of at least 200, preferably of at least 250.
2. The composition according to claim 1, wherein the composition contains at least 10% caramelised carbohydrate by weight of dry solids.
- 10 3. The composition according to claim 1 or 2, wherein the composition contains at least 0.5%, preferably at least 1.0 %, N-heterocyclic substances.
4. The composition according to any one of claims 1-3, wherein the composition
- 15 contains at least 0.5%, preferably at least 1% by weight of dry matter, of pyrazine derivatives according to formula (I):



(I)

- wherein $R_1 - R_4$ independently represent hydrogen; a hydroxyhydrocarbyl residue or an ester of a hydroxyhydrocarbyl residue; or an ether of a hydroxyhydrocarbyl residue;
- 20 and at least one of $R_1 - R_4$ is a hydroxyhydrocarbyl residue or an ester or an ether thereof.

5. The composition according to claim 4, wherein the hydroxyhydrocarbyl residue comprises 1-10 carbon atoms.
- 25 6. The composition according to claim 4 or 5, wherein the pyrazine derivative contains at least two hydroxyhydrocarbyl residues.

7. The composition according to any one of the preceding claims, wherein the composition contains at least 0.1%, preferably at least 0.3%, of a fructosazine selected from the group consisting of 2,5-deoxyfructosazine, 2,6-deoxyfructosazine, 2,5-fructosazine, 2,6-fructosazine and combinations thereof, by weight of dry matter.
- 5 8. The composition according to any one of the preceding claims, wherein the composition is essentially completely water soluble.
9. The composition according to any one of the preceding claims, wherein the
10 composition contains less than 30 %, by weight of dry matter, of components having a molecular weight in excess of 30 kDa, particularly in excess of 5 kDa.
10. The composition according to any one of the preceding claims, wherein the
15 colour intensity of the composition at 610 nm does not exceed 0.024, preferably does not exceed 0.01.
11. The composition according to any one of the preceding claims, wherein the solids content of the composition is at least 10 wt.%, preferably at least 20 wt.%, most preferably at least 30 wt.%.
- 20 12. The composition according to any one of the preceding claims, wherein the total nitrogen content of the composition, as determined by Nitrogen Determination (Kjeldahl Method), Method II (FNP 5), is less than 20%, by weight of dry matter, preferably within the range of 0.1 to 15%, by weight of dry matter.
- 25 13. Use of a composition according to any one of claims 1-12 as an additive to prevent or reduce light induced flavour changes in beverages or foodstuffs.
14. Use according to claim 13, wherein the composition is introduced into the
30 beverage or foodstuff in an amount of between 0.01 and 1 wt.%, preferably of between 0.02 and 0.3 wt.%, calculated on the basis of the amount of dry matter introduced.

15. Use according to claim 13 or 14, wherein the composition is introduced into a bottled beverage, preferably into a beverage bottled in green, clear or blue glass.
16. Use according to any one of claims 13-15, to prevent or reduce light induced flavour changes in beer, more preferably in beer exhibiting an EBC colour value of less than 25, preferably of less than 15.
17. A method of manufacturing a beverage or a foodstuff that is resistant to light induced flavour changes, said method comprising introducing into said beverage or foodstuff a composition according to any one of claims 1-12.
18. The method according to claim 17, wherein the composition is introduced into the beverage or foodstuff in an amount of between 0.01 and 1 wt.%, preferably of between 0.02 and 0.3 wt.%, calculated on the basis of the amount of dry matter introduced.
19. The method according to claim 17 or 18, wherein the composition is introduced into a bottled beverage, preferably into a beverage bottled in green, clear or blue glass.
20. The method according to any one of claims 17-19, comprising introducing the composition into beer, more preferably into a beer exhibiting an EBC colour value of less than 25, preferably of less than 15.
21. A process for the manufacture of a composition that may suitably be used as an additive to improve the stability of beverages or foodstuffs against light induced flavour changes, said process comprising the steps of:
- providing a caramelised feedstock;
 - decolourising said feedstock so as to increase its $A_{280/560}$ by at least 100%.
22. Process according to claim 21, wherein the feedstock is subjected to a filtration step.

23. Process according to claim 21 or 22, wherein the feedstock contains at least 50% by weight of dry matter of brewing adjuncts, including at least 5% caramel by weight of dry matter.
- 5 24. Process according to claim 23, wherein the feedstock contains at least 10%, preferably at least 30% caramel by weight of dry matter.
25. Process according to claim 24, wherein the caramel is ammonia caramel, sulphite ammonia caramel or a combination thereof.
- 10 26. Process according to any one of claims 21-25, wherein the colour intensity of the feedstock at 610 nm exceeds 0.01, preferably exceeds 0.024.
27. Process according to any one of claims 21- 26, wherein the colour intensity of
15 the feedstock is reduced by at least a factor 10 as a result of the decolouration.
28. Process according to any one of claims 21-27, wherein the yield of the process is in the range of 5-90%, preferably in the range of 10-80%.
- 20 29. A beverage or foodstuff that is resistant to light induced flavour changes, wherein the beverage or foodstuff is obtained by a method according to any one of claims 17-20.
30. A hop containing beverage that is resistant to light induced flavour changes,
25 said beverage being characterised by an EBC colour value of less than 25, preferably of less than 15, and a content of the pyrazine derivatives as defined in claim 4, expressed in mg/kg, that exceeds 0.1 x EBC colour value.
31. Beverage according to claim 30, wherein the beverage contains at least 0.5
30 mg/kg, preferably at least 1 mg/kg of the pyrazine derivatives as defined in claim 4.
32. Beverage according to claim 31, wherein the hydroxyhydrocarbyl residue comprises 1-10 carbon atoms.

33. Beverage according to claim 31 or 32, wherein the hydroxyhydrocarbyl residue comprises at least two hydroxyl groups.

5 34. Beverage according to any one of claims 31-33, wherein the pyrazine derivative contains at least two hydroxyhydrocarbyl residues.

35. Beverage according to any one of claims 31-34, wherein the beverage contains at least 0.5 mg/kg, preferably at least 1 mg/kg of a fructosazine selected from the group
10 consisting of 2,5-deoxyfructosazine, 2,6-deoxyfructosazine, 2,5-fructosazine, 2,6-fructosazine and combinations thereof.

36. Beverage according to any one of claims 29-35, wherein said beverage is bottled in green, clear or blue glass.